

**RESPONSE UNDER 37 C.F.R. § 1.116
EXPEDITE PROCEDURE
EXAMINING GROUP 1796**
Application Number: 10/650,044
Attorney Docket Number: 101175-00035

REMARKS

The Office Action dated July 21, 2008 has been received and carefully noted. The above amendments and the following remarks are being submitted as a full and complete response thereto.

Claims 1 and 3-7 have been rejected. Claims 1 and 2 have been cancelled, claims 3 and 5-7 have been amended, and new claim 8 has been added. Thus, claims and 3-8 are pending in this application. Support for the amendments may be found in the specification as originally filed. Applicants submit that no new matter is added. Applicants respectfully request reconsideration and withdrawal of all rejections.

Rejection Under 35 U.S.C. §112

Claims 1 and 3-7 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. In particular, the Office Action asserts that the provision in claim 1 of "a pressurizing means, provided only in the second supply line" contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention. The Applicants respectfully submit that claim 1 has been cancelled, rendering this rejection moot.

Thus, Applicants respectfully request the withdrawal of the §112, first paragraph, rejection of claims 1 and 3-7.

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Rejection Under 35 U.S.C. §103

Claims 1 and 5-7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fairlie et al. (WO 00/69773, hereinafter "Fairlie") in view of Sircar et al. (U.S. Patent No. 6,103,143, hereinafter "Sircar"). Claims 3 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fairlie in view of Ogino (JP 10-139401, hereinafter "Ogino"). Applicants respectfully traverse these rejections.

Claim 1 has been cancelled, rendering its rejection moot. Claims 3 and 5-7 have been amended to depend from new independent claim 8. Claim 8 recites:

A hydrogen supply unit comprising:
 a reforming means for generating hydrogen gas by reforming a source gas;
 a first purifying means connected to the reforming means for purifying hydrogen gas reformed by the reforming means;
 a first storage means for storing and supplying the hydrogen gas reformed by said reforming means to a first fuel cell used as a stationary electric power supply;
 a first supply line connecting the first purifying means to the first storage means and supplying the hydrogen gas from the reforming means to the first storage means;
 a **second storage means** for storing and supplying the hydrogen gas reformed by said reforming means to a second fuel cell used as a mobile electric power supply;
 a **second supply line connected to the first supply line downstream of the first purifying means** supplying the hydrogen gas from the reforming means to the second storage means;
 a **second purifying means, located in the second supply line**, for purifying hydrogen gas reformed by the reforming means; and
 a **pressurization means, provided in the second supply line between the second purifying means and the second storage means**, for pressurizing the hydrogen gas to be stored by the second storage means,
 wherein the first storage means stores the hydrogen gas purified by the first purifying means and the second storage means

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stores the hydrogen gas purified by the second purifying means.
(emphasis added)

Primary reference Fairlie describes hydrogen production and delivery equipment with or without by-product sequestration equipment, and with or without by-product hydrogen storage facilities (see Fairlie p. 4, lines 21-23). The hydrogen storage facilities may be on the vehicle or at off-vehicle storage sites for later on-vehicle transfer. The hydrogen production source 10 (see Fig. 1) of Fairlie is disclosed as a black box with absolutely no information as to its contents.

The Office Action relies on Fairlie for teaching (see Office Action pages 3-4) the features recited in previous claim 1. The Office Action admits that although Fairlie teaches that the network may have a purifier (see p. 5, line 7), it does not teach two separate purifying means, as required by claim 8. The Office Action relies on secondary reference Sircar for teaching this feature (see col. 8, line 67 – col. 9, line 2). The Office Action takes the position that it is well known in the art that different users of a hydrogen source often require different purities and that it would have been obvious to one of ordinary skill in the art at the time of the invention to add another purification means in “the second supply line” to supply a second user with a different purity of hydrogen than that which is supplied to a first user. There is no basis for this position.

The Applicants submit that the proposed combination of Fairlie and Sircar fails to teach or suggest the specifically claimed features of the hydrogen supply unit, as recited in claim 8. Nowhere do Fairlie or Sircar teach or suggest “a second supply line connected to the first supply line downstream of the first purifying means supplying the

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hydrogen gas from the reforming means to the second storage means", as recited in claim 8. In addition, nowhere do Fairlie or Sircar teach or suggest "a second purifying means, located in the second supply line, for purifying hydrogen gas reformed by the reforming means", as recited in claim 8. Further, nowhere do Fairlie or Sircar teach or suggest "a pressurization means, provided in the second supply line between the second purifying means and the second storage means, for pressurizing the hydrogen gas to be stored by the second storage means", as recited in claim 8. In contrast to the presently claimed invention, the hydrogen fuel network of Fairlie is described in very general terms and the presence of specific network equipment and the arrangement and connections between the equipment are neither taught nor suggested.

Moreover, Fairlie fails to teach or suggest a hydrogen supply unit including a second storage means, as recited in claim 8. A storage unit typically occupies a large volume within a hydrogen supply unit. When hydrogen is supplied to a plurality of hydrogen supply destinations from the same reformer, a person of ordinary skill in the art would provide one reformer, one purifying means, and one storage means to be used commonly for all destinations. Such person would then distribute hydrogen to each of the supply destinations by branching a plurality of supply lines downstream of the storage means. The Applicants submit that Fairlie is based on this conventional concept and does not teach that two storage means are both provided in a hydrogen supply unit as recited in claim 8. Since Fairlie does not teach or suggest a second purifying means or a second storage means, as claimed, it also fails to teach or suggest

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that "the second storage means stores the hydrogen gas purified by the second purifying means" as recited in claim 8.

Further, the Applicants submit that Fairlie and Sircar do not provide any suggestion or motivation to have "a second supply line connected to the first supply line downstream of the first purifying means" and "a second purifying means located in the second supply line, for purifying hydrogen gas reformed by the reforming means", as recited in claim 8. The Applicants submit that Sircar teaches only that the acceptable amount of impurities (allowable degree of purity of hydrogen) differs depending on the purpose of using the hydrogen (see at col. 8, line 67 - col. 9, line 2). Sircar does not teach changing the degree of purity within the existing hydrogen supply unit. As previously discussed, a person of ordinary skill in the art would provide one reformer, one purifying means, and one storage means to supply hydrogen to multiple hydrogen users. Therefore, when different users require different purities, a person of ordinary skill in the art would purify hydrogen gas based on the higher purity degree request to meet both requests, by using the existing purifier and the existing storage unit.

With regard to the rejection of claims 3 and 4, the Applicants respectfully submit that secondary reference Ogino fails to remedy the deficiencies of Fairlie discussed above in reference to claim 8.

Having highlighted numerous deficiencies in the cited references, the Applicants respectfully submit that claims 1 and 5-7 are not obvious over the proposed combination of Fairlie and Sircar and claims 3 and 4 are not obvious over the proposed combination of Fairlie and Ogino. Thus, Applicants respectfully request reconsideration and

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withdrawal of the rejection of claims 5 and 5-7 under 35 U.S.C. §103(a) over Fairlie in view of Sircar and the rejection of claims 3 and 4 under 35 U.S.C. §103(a) over Fairlie in view of Ogino.

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CONCLUSION

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event that this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account Number 01-2300, referencing Docket Number 101175-00035.

Respectfully submitted,


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